ISSN: 2658-8455
Volume 5, Issue 8 (2024), pp. 22-39.

IJAFAME
International Journal of Accounting, Finance, Auditing, Management & Economics

The mediating role of decision-making capacity and transparency between financial information systems and organizational effectiveness in Morocco: Case of AREF

Abdeslam ETTAGUENAOUTY, *(PhD, Student)*
Faculty of Legal, Economic and Social Sciences Ait Melloul,
Ibn Zohr University of Agadir, Morocco

Elarbi EL FAKIR, *(Associate Professor)*
Faculty of Legal, Economic and Social Sciences Ait Melloul,
Ibn Zohr University of Agadir, Morocco

Correspondence address :	Université Ibn Zohr, Faculté des Sciences Juridiques, Économiques et Sociales Ait Melloul, Maroc
Disclosure Statement :	Authors are not aware of any findings that might be perceived as affecting the objectivity of this study and they are responsible for any plagiarism in this paper.
Conflict of Interest :	The authors report no conflicts of interest.
Cite this article :	ETTAGUENAOUTY, A., & EL FAKIR, E. (2024). The mediating role of decision-making capacity and transparency between financial information systems and organizational effectiveness in Morocco: Case of AREF. *International Journal of Accounting, Finance, Auditing, Management and Economics*, *5*(8), 22-39. https://doi.org/10.5281/zenodo.13328648
License	**This is an open access article under the CC BY-NC-ND license**

Received: June 14, 2024 *Accepted: August 13, 2024*

International Journal of Accounting, Finance, Auditing, Management and Economics - IJAFAME
ISSN: 2658-8455
Volume 5, Issue 8 (2024)

The mediating role of decision-making capacity and transparency between financial information systems and organizational effectiveness in Morocco: Case of AREF

Abstract:

This article examines the mediating role of decision-making capacity and organizational transparency between the quality of financial information systems (FIS) and organizational effectiveness in Morocco, particularly within the Regional Academies of Education and Training (AREF). The objective is to understand how high-quality FIS and their integration into decision-making processes can improve organizational performance.
The methodology uses Structural Equation Modeling (SEM) to analyze complex relationships between observed and latent variables. A sample of 110 respondents from the AREF, collected through a questionnaire via Google Forms, represents various administrative functions.
The results show that the quality of FIS is positively correlated with organizational effectiveness, although this effect is modest. Accurate financial reports facilitate managerial decision-making. The integration of FIS into decision-making processes improves the responsiveness and flexibility of public administrations. The decision-making capacity of administrators mediates the relationship between FIS quality and organizational effectiveness, allowing for better resource allocation. Organizational transparency strengthens stakeholder trust and improves governance.
These results highlight the importance of investing in high-quality FIS, promoting their integration into decision-making processes, and improving transparency to maximize organizational effectiveness.

Keywords: Financial Information Systems (FIS), Organizational Effectiveness, Decision Making Capacity, Organizational Transparency, Structural Equation Modeling (SEM).
Classification JEL: H83, D83, I21, L25, M15
Paper type: Empirical Research

ISSN: 2658-8455
Volume 5, Issue 8 (2024), pp. 22-39.

1. Introduction

The globalization and the rapid evolution of information technology have transformed expectations and requirements for transparency and organizational efficiency worldwide. High-quality financial information systems play a crucial role in managerial decision-making, directly influencing organizational performance. In this perspective, the research by Gardi et al. (2021) demonstrated that accurate and comprehensible financial reports significantly improve managerial decisions, especially in SMEs (Gardi et al., 2021) . Similarly, the study by Van Nhi & Thoa (2020) on the Vietnamese public sector revealed that top management support is essential for enhancing financial information transparency, positively impacting organizational efficiency (Van Nhi & Thoa, 2020).

In Morocco, as in many developing countries, improving the quality of financial information systems and organizational transparency has become a priority to enhance the efficiency of public administrations (Errami & Cargnello, 2018). The research by Hertati et al. (2020) showed that managerial commitment to the implementation of management accounting information systems is crucial for effective decision-making, highlighting the importance of transparency and the quality of financial information (Hertati et al., 2020).

Moreover, managerial decision-making capacity and organizational transparency play essential mediating roles between financial information systems and organizational efficiency. The study by Sari and Priantinah (2019) emphasizes that management information systems (MIS) are critical for managerial decision-making and can enhance organizational efficiency by ensuring optimal data collection and utilization (Sari & Priantinah, 2019). Additionally, information transparency is identified as a key factor for employee engagement and improving organizational performance, as shown by Ismael and Mustafa (2019) in the hotel sector (ISMAEL & AMEDI, 2019).

Therefore, the choice of the Regional Academies of Education and Training (AREF) as the study subject is motivated by several reasons. Firstly, the AREFs play a central role in managing education at the regional level, making them key actors in the implementation of educational policies in Morocco. Secondly, improving organizational efficiency within the AREFs has a direct impact on the quality of education, which is crucial for the socio-economic development of the country. Finally, the AREFs provide a relevant framework for studying the impact of financial information systems and organizational transparency due to their complex administrative structure and need for transparency and efficiency in managing public resources.

This article aims to examine the mediating role of managerial decision-making capacity and organizational transparency between the quality of financial information systems and organizational efficiency in the Moroccan context, particularly within the AREFs.

In this context, the methodological approach of this article is based on Structural Equation Modeling (SEM). This multivariate statistical technique combines factor analysis and multiple regression to analyze structural relationships. It allows for testing complex theoretical models and examining causal relationships between observed and latent variables. The use of SEM is well justified in similar research, as demonstrated by Palma-Alicer et al. (2022) in their study on employee performance in a government agency (Palma-Alicer et al., 2022).

Similarly, the epistemological stance adopted in this article is positivism. This perspective emphasizes objectivity and scientific rigor in data analysis, relying on quantitative methods to test formulated hypotheses.

From this standpoint, the reasoning mode used is hypothetico-deductive. This mode involves formulating hypotheses based on existing theories and empirically testing them through data analysis. This approach allows for confirming or refuting research hypotheses, thereby contributing to the advancement of knowledge in the field studied.

To this end, this article will be divided into four sections. The first will present the literature review, the second will present the conceptual model and hypotheses, the third will present the methodology, and finally, the fourth will present the results.

2. Literature Review

The Research on the impact of financial information systems (FIS) on organizational effectiveness highlights the importance of two key mediating concepts: decision-making capacity and transparency. This literature review explores these concepts and their interrelations. FIS are systems used to collect, process, and analyze financial data, providing crucial information for economic and financial decision-making (Malekinejad, 2016). Decision-making capacity refers to an organization's ability to make effective strategic decisions using the information provided by FIS (Sewandono, 2021). Furthermore, transparency in organizations refers to the clarity, accuracy, and availability of financial information, enabling better accountability and informed decision-making (Vaccaro & Madsen, 2009). Organizational effectiveness is the ability of an organization to achieve its goals efficiently, often measured by financial and non-financial performance (Aydiner et al., 2019).

It is evident that FIS provide essential data for financial and operational management, directly influencing organizational effectiveness (Salehi et al., 2015). Moreover, studies show that decision-making capacity enhances the impact of FIS on financial performance by enabling more effective strategic decision-making (Nour et al., 2022). A good decision-making capacity positively moderates the relationship between information systems capabilities and organizational performance (Mao et al., 2021).

Furthermore, transparency improves the quality of decisions made by providing complete and accurate information, which strengthens organizational effectiveness (Nias Ahmad et al., 2016). Financial transparency fosters trust and accountability, crucial elements for effective management (Schnackenberg, 2010). Thus, the effective integration of FIS within an organization, mediated by robust decision-making capacity and increased transparency, leads to a significant improvement in organizational effectiveness. Decision-making capacity and transparency act as critical levers, amplifying the impact of financial information on organizational performance.

In Morocco, Boutbhirt & Adaskou (2023) studied the impact of performance indicators of small and medium-sized enterprises (SMEs) on their financial structure. They found that variables such as guarantees and the size of the enterprises positively influence performance, while other variables have a negative impact.

Furthermore, the role of transparency and regulation is highlighted by an analysis of recent losses related to the use of derivatives. These losses reveal control and transparency issues within financial enterprises. The increasing complexity of these products makes their management difficult, justifying increased regulation to improve transparency and protect shareholders' interests (Lannoo & Thomadakis, 2020).

Additionally, a study on farmers' capital management choices shows the importance of information systems in understanding investment decisions. The transparency of financial information and internal management capacity are essential for improving organizational efficiency (Monteiro et al., 2022).

Moreover, research on international financial system reforms suggests that strengthened surveillance measures are necessary to ensure transparency and resilience of financial systems in the face of crises. These measures contribute to better risk management and greater market efficiency (Bolton et al., 2021).

In addition, the article on excess capacity in enterprises highlights that transparency and effective management of financial assets are necessary to maintain a balance between costs and outputs, leading to better organizational performance (Zadorozhnyi et al., 2021).

ISSN: 2658-8455
Volume 5, Issue 8 (2024), pp. 22-39.

On the one hand, transparency in the management of public finances is crucial for better governance and optimized economic and social outcomes. Indeed, transparency allows for more efficient management of public funds, which is essential for improving the provision of public services such as education (Taouab & Ameur, 2018).
On the other hand, the capabilities of information systems are crucial for business performance. Decision-making performance plays a critical mediating role in this relationship, indicating that improving information systems can directly impact organizational effectiveness (Aydiner et al., 2019).
Moreover, public governance reforms and advanced regionalization in Morocco show that transparent financial management systems can support effective policies and strengthen the decision-making capacities of local administrations. These reforms are essential for improving regional management and the implementation of public policies (Bergh, 2016).
Finally, knowledge management, influenced by organizational culture and structure, also improves organizational effectiveness. Knowledge management practices mediate the impact of organizational culture and structure on organizational effectiveness, demonstrating the importance of a holistic approach to managing information and resources (Zheng et al., 2010).
In this regard, this literature review reveals a significant gap in research exploring the mediating role of decision-making capacity and transparency between financial information systems and organizational effectiveness, particularly in the context of Regional Academies of Education and Training (AREF) in Morocco. While existing studies highlight the importance of transparency in public financial management for governance and organizational performance, as well as the crucial role of information systems in business performance, they do not specifically address the unique dynamics and challenges faced by AREFs in Morocco. Consequently, this article aims to fill this gap by investigating how decision-making capacity and transparency influence the effectiveness of financial information systems in improving the organizational performance of AREFs, thus providing valuable insights and practical implications for enhancing educational governance in the region.

3. Conceptual model and hypotheses

In an increasingly complex economic and social environment, public administrations face major challenges in financial management and accountability. Digitalization and financial information systems (FIS) are essential levers for improving organizational efficiency and transparency in public institutions. The hypothesis that "**the quality of the financial information system is positively associated with the organizational efficiency of public administration**" is supported by several recent studies.
For example, Defacqz & Dupuy (2023) showed that the implementation of the interministerial financial information system, Chorus, transformed financial management in France, improving coordination and transparency. Similarly, Onaolapo & Odetayo (2012) found that an efficient accounting information system significantly enhances organizational performance in Nigeria.
In addition, Kaplan et al., (1998) emphasized the importance of high-quality data for reliable financial statements. Negash et al., (2003) demonstrated that the quality of systems is crucial for the effectiveness of customer support systems, which can be applied to public FIS. Furthermore, Sajady et al., (2008) found that accounting information systems improve decision-making and internal controls. Moreover, Gorla et al., (2010) discovered that the quality of systems, information, and services increases organizational impact. Finally, Petter et al., (2013) confirmed that the quality of information systems contributes to organizational efficiency.
Building on this, integrating financial information systems into decision-making processes is essential for modernizing public administrations and improving their organizational efficiency.

Wixom & Watson (2001) showed that using information from FIS in decision-making processes enhances organizational performance. Similarly, Weber & Pliskin (1996) found a positive relationship between the integration of information systems and efficiency in mergers and acquisitions. Additionally, Hendriks (2012) provided guidelines for the effective implementation of Integrated Financial Management Information Systems (IFMIS) in the South African public sector, aiming to improve public sector management.

Furthermore, the hypothesis that "**the decision-making capacity of leaders mediates between the quality of the financial information system and organizational efficiency in public administration**" is supported by various studies. Aydiner et al., (2019) examined the interrelationships between information systems capabilities and business performance, while Iselin (1996) highlighted the effect of accounting information on decision-making quality. Additionally, Wang & Byrd (2017) explored the mediating role of knowledge absorption capacity in the relationship between business analytics capabilities and decision-making efficiency.

The quality of the financial information system plays a crucial role in improving organizational efficiency within public administration, which constitutes the global hypothesis. Indeed, this quality directly influences the decision-making capacity of leaders, which in turn impacts the overall efficiency of the organization. Furthermore, it is essential to understand that the decision-making capacity of leaders acts as a key mediator between the information system and organizational efficiency, corresponding to the mediation hypothesis. Thus, improving information systems not only leads to better decision-making but is also essential for enhancing the overall efficiency of the organization.

Moreover, **organizational transparency acts as an important mediating variable in the relationship between the integration of financial information systems and organizational efficiency in public administration**. Rodríguez Bolívar et al., (2013) found that administrative culture significantly influences the transparency and disclosure of public financial information. Similarly, Kaufmann & Weber (2010) emphasized the importance of transparency for good governance and sound financial regulation. Albu & Wehmeier (2014) also showed that organizational transparency can affect efficiency during crises.

The integration of financial information systems plays a crucial role in improving organizational efficiency within public administration, which constitutes the global hypothesis. This integration directly influences organizational transparency, an essential element for good governance and financial regulation. Moreover, organizational transparency, as a mediating variable, enhances the efficiency of the organization, particularly during crises, as demonstrated by several studies. Thus, the mediation hypothesis highlights that organizational transparency is the key link between the integration of financial information systems and overall organizational efficiency.

To test these hypotheses, we will focus on the Regional Academies of Education and Training (AREF) in Morocco. The AREFs provide a relevant context to explore the mediating role of decision-making capacity and transparency between financial information systems (FIS) and organizational effectiveness.

4. Methodology

The epistemological position adopted in this article is positivism, which holds that reality is objective and can be measured independently of the observer. This approach allows for rigorous quantitative data collection and analysis to test the formulated hypotheses (Hartas, 2010). Our main hypotheses are as follows: the quality of the financial information system (FIS) is positively associated with the organizational efficiency of public administration, the integration of the FIS into decision-making processes is positively associated with organizational efficiency, the decision-making capacity of administrators mediates between the quality of the FIS and organizational efficiency, and organizational transparency acts as a mediating variable in the relationship between FIS integration and organizational efficiency.

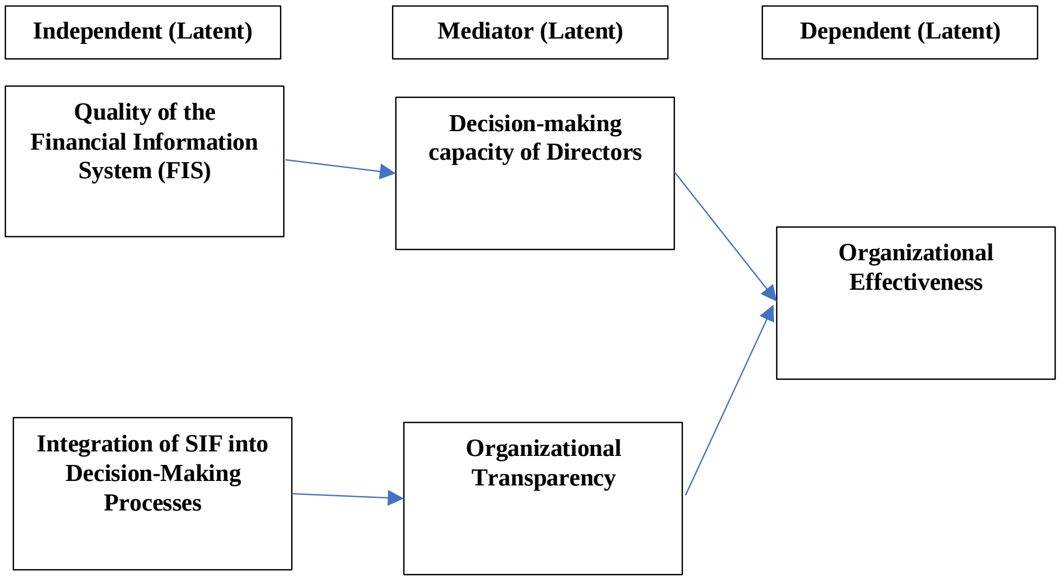
The mode of reasoning used is hypothetico-deductive. This methodological framework starts with the formulation of hypotheses based on existing theory, followed by the collection of empirical data to test these hypotheses (Popper, 1959). This method is commonly used in social and economic research to verify the validity of theoretical relationships between variables. To analyze the collected data, we used Structural Equation Modeling (SEM), an advanced statistical technique that allows testing complex relationships between multiple variables simultaneously. SEM combines aspects of factor analysis and multiple regression, enabling the modeling of hypothetical causal relationships between latent variables (variables that are not directly observable) and manifest variables (observable variables). This method is particularly useful for studies where theoretical concepts are measured by several indicators (Thakkar, 2020).

We specifically employed the Partial Least Squares (PLS) algorithm for SEM, which is a component-based approach well-suited for small to medium-sized samples and complex models with latent variables. PLS-SEM is preferred when the research objective is prediction and when the models are relatively new or underdeveloped in the literature (Sarstedt et al., 2021). To ensure the robustness of the results, we used the bootstrap technique, a resampling method that estimates the precision of the estimations by generating several subsamples from the original sample. This method allows obtaining confidence intervals for path coefficient estimations, adding to the reliability of the obtained results (Hair et al., 2019).

The sample of our study includes 110 respondents from the Regional Academy of Education and Training (AREF) in Morocco. The data were collected using a questionnaire administered via Google Forms, allowing for rapid and efficient data collection. Respondents were chosen to represent various administrative functions within the AREF, ensuring a diversity of perspectives and representativeness of different decision-making levels within the organization.

The latent independent variables in our study include the quality of the financial information system (FIS), measured by items such as accuracy, reliability, relevance, and ease of access, according to Kaplan et al. (1998) and Wang Omotilewa et al. (2021), as well as the integration of the FIS into decision-making processes, measured by the degree of use in daily and strategic decision-making, accessibility, and adequacy, as suggested by Hendriks (2012) and Xu (2023). The latent mediating variables include the decision-making capacity of administrators, evaluated by their understanding of FIS information, their use in strategic decision-making, and their ability to generate alternatives, according to Wang Jia-yang (2009), Zeqiri et al. (2017), and Hawley et al. (1990), as well as organizational transparency, measured by the ease of access to financial information, its clarity and understandability, and response time, as studied by Rodríguez Bolívar et al. (2013), Pasquier and Villeneuve (2007), and Kaufmann and Weber (2010). The latent dependent variable of the study is organizational efficiency, evaluated by productivity, service quality, administrator and user satisfaction, and efficient use of resources, based on the works of Beheshti and Beheshti (2010), Soputan and Mogea (2014), and Kim (2004).

Figure 1:The graphical structural equation model and its causal relationships



Source: by the authors

Table 1:Summary table summarizing the variables by their types, their measurement scales, and the items by author

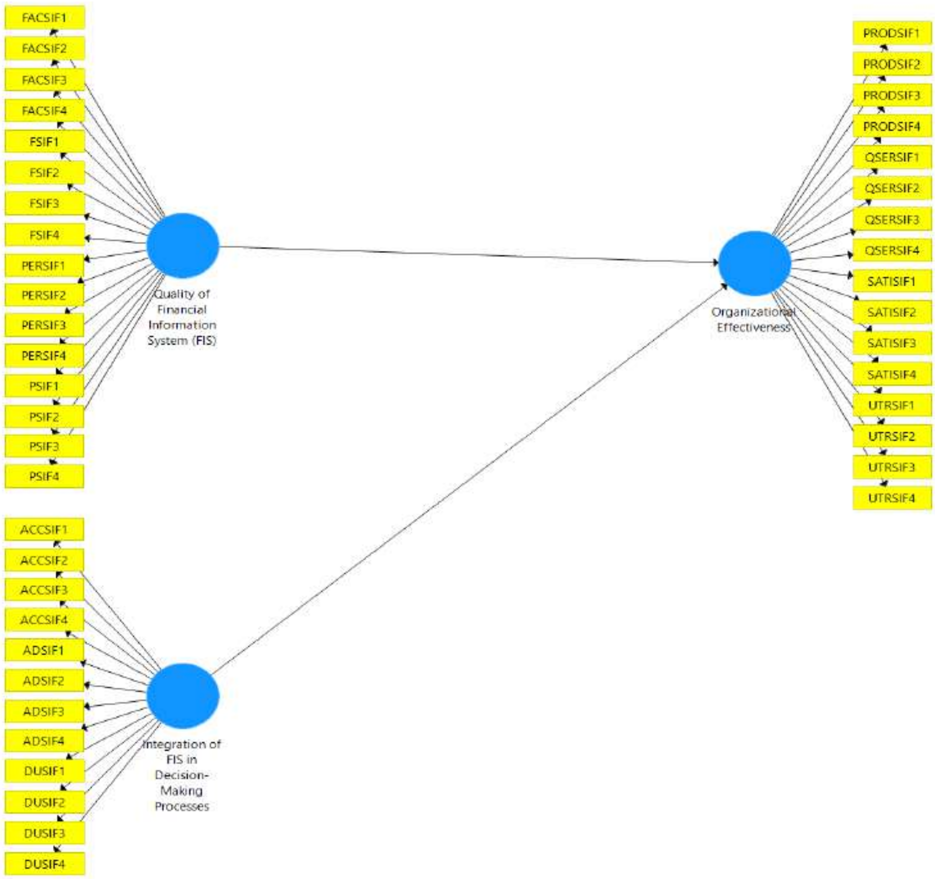
Type of Variables	Variables	Items	Number of items	Authors and Year
Independent (Latent)	Quality of Financial Information System (FIS)	Accuracy, Reliability, Relevance, Ease of Access	4	(Kaplan et al., 1998);
Independent (Latent)	Integration of FIS into Decision-Making Processes	Degree of Use in Daily and Strategic Decision-Making, Accessibility, Adequacy	4	(Hendriks, 2012)
Mediator (Latent)	Decision-Making Capacity of Administrators	Understanding of FIS Information, use in Strategic Decision-Making, Ability to Generate Alternatives	4	(Jia-yang, 2009); (Zeqiri & SADRI ALIJI, 2017)
Mediator (Latent)	Organizational Transparency	Ease of Access to Financial Information, Clarity and Understandability, Response Time	3	(Rodríguez Bolívar et al., 2013); (Pasquier & Villeneuve, 2007); (Kaufmann & Weber, 2010)
Dependent (Latent)	Organizational Effectiveness	Productivity, Quality of Services, Satisfaction of Administrators and Users, Efficient Use of Resources	4	(Beheshti & Beheshti, 2010);(Soputan & Tini Moge, 2014); (Kim, 2004)

Source: by the authors

5. Results

The evaluation of the measurement model aims to verify the reliability and validity of the instruments used for the latent variables. This step ensures that the measurement scales are consistent and accurate. The analyses include examining factor loadings, composite reliability, Cronbach's alpha, and convergent and discriminant validity. These tests confirm that the selected indicators adequately represent the underlying theoretical constructs.

Figure 2:Causal model without mediation



Source: by the authors

Table 2:Reliability and Validity of Constructs

Variables	Cronbach's Alpha	Jöreskog's Rho	Composite Reliability	Average Variance Extracted (AVE)
Organizational Effectiveness	0.930	0.964	0.938	0.657
Integration of FIS in Decision-Making Processes	0.924	0.917	0.931	0.575
Quality of Financial Information System (FIS)	0.918	0.962	0.921	0.541

Source: by the authors

The table above shows high reliability and validity for three constructs: organizational effectiveness, integration of FIS in decision-making, and quality of FIS. Cronbach's Alpha values (all above 0.918), Jöreskog's Rho, and composite reliability values indicate strong internal consistency. The AVE values, all above 0.50, confirm good convergent validity, ensuring that the constructs adequately represent the underlying theoretical concepts. These results demonstrate that the measurement instruments used are both reliable and valid for assessing the constructs in our study.
The table 3 below presents the discriminant validity of the constructs using the Fornell-Larcker criterion, which assesses if each construct correlates more strongly with its own indicators than with those of other constructs. The diagonal values (in bold) represent the square root of the average variance extracted (AVE), while the off-diagonal values represent the correlations between constructs. Organizational effectiveness has a square root of AVE of 0.810, indicating that most of the variance in its items is explained by the construct itself. Its correlations with the integration of FIS and the quality of FIS are -0.082 and 0.151, respectively, showing distinctiveness. The integration of FIS has a square root of AVE of 0.758 and a high negative

correlation with the quality of FIS (-0.872), suggesting potential overlap. Its correlation with organizational effectiveness is low (-0.082). The quality of FIS has a square root of AVE of 0.736, with a high negative correlation with the integration of FIS (-0.872) and a low correlation with organizational effectiveness (0.151).

Table 3:Discriminant Validity of Constructs

	Organizational Effectiveness	Integration of FIS in Decision-Making	Quality of Financial Information System (FIS)
Organizational Effectiveness	0.810		
Integration of FIS in Decision-Making	-0.082	0.758	
Quality of Financial Information System (FIS)	0.151	-0.872	0.736

Source: by the authors

Table 4:Path Coefficients

Variables	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Integration of FIS in Decision-Making -> Organizational Effectiveness	0.928	0.926	0.028	33.161	0.000
Quality of Financial Information System (FIS) -> Organizational Effectiveness	0.098	0.098	0.037	2.658	0.008

Source: by the authors

The table 4 above presents the path coefficients for two hypothetical relationships in the structural model: the integration of the Financial Information System (FIS) in decision-making processes to organizational effectiveness and the quality of FIS to organizational effectiveness. The statistics include the original sample, sample mean, standard deviation, T statistics, and P values.

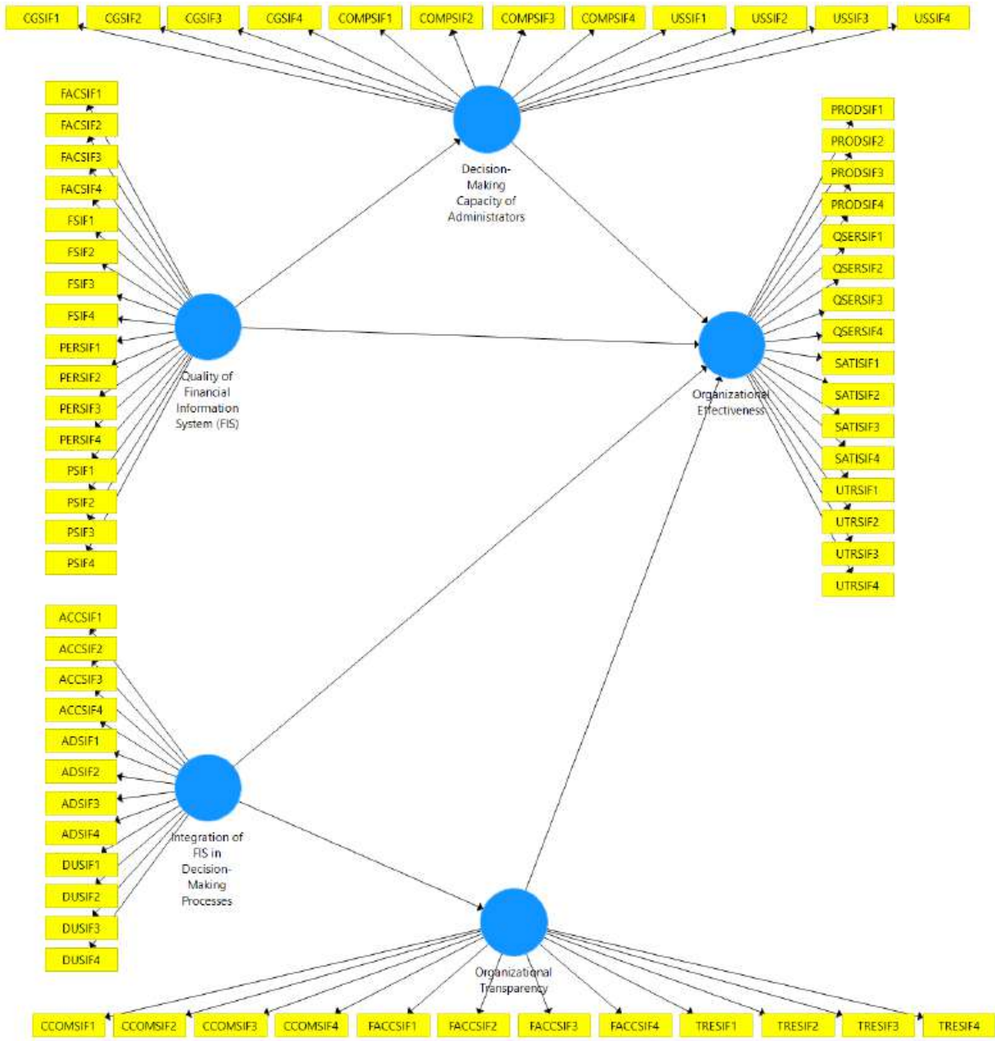
For the relationship between FIS integration in decision-making and organizational effectiveness, the path coefficient is very high at 0.928 in the original sample and 0.926 in the bootstrap sample mean. The standard deviation is low at 0.028, indicating minimal variability in the estimates. The T statistics are extremely high at 33.161, with a P value of 0.000, indicating a highly significant relationship. These results suggest that FIS integration in decision-making has a strong and significant impact on organizational effectiveness.

For the relationship between FIS quality and organizational effectiveness, the path coefficient is 0.098 in both the original sample and the bootstrap sample mean. The standard deviation is 0.037, indicating moderate variability. The T statistics are 2.658, with a P value of 0.008, indicating a significant but relatively modest relationship compared to FIS integration. These results suggest that while FIS quality significantly impacts organizational effectiveness, the effect is smaller than that of FIS integration in decision-making processes.

The table 5 below presents the specific indirect effects for the relationships between the independent variables (quality of the Financial Information System (FIS) and integration of FIS in decision-making processes) and the dependent variable (organizational effectiveness) through the mediating variables (decision-making capacity of administrators and organizational transparency). The statistics include the original sample, sample mean, standard deviation, T statistics, and P values.

For the relationship between FIS quality and organizational effectiveness via decision-making capacity, the indirect effect is 0.349 in the original sample and 0.355 in the bootstrap sample mean. The standard deviation is 0.068, indicating moderate variability. The T statistics are 5.112 with a P value of 0.000, indicating high significance. This suggests that the decision-making capacity of administrators is a strong and significant mediator between FIS quality and organizational effectiveness.

Figure 3:Causal model with mediation



Source: by the authors

Table 5:Specific Indirect Effects

Variables	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Quality of Financial Information System (FIS) -> Decision-Making Capacity of Administrators -> Organizational Effectiveness	0.349	0.355	0.068	5.112	0.000
Integration of FIS in Decision-Making Processes -> Organizational Transparency -> Organizational Effectiveness	0.149	0.139	0.066	2.252	0.024

Source: by the authors

For the relationship between FIS integration in decision-making and organizational effectiveness via organizational transparency, the indirect effect is 0.149 in the original sample and 0.139 in the bootstrap sample mean. The standard deviation is 0.066, indicating relative variability. The T statistics are 2.252 with a P value of 0.024, indicating significance. This suggests that organizational transparency is a moderate but significant mediator between FIS integration in decision-making and organizational effectiveness.

Thus, the specific indirect effects reveal that the decision-making capacity of administrators and organizational transparency play important and significant mediating roles in the relationships between FIS quality and integration in decision-making processes, respectively, and organizational effectiveness.

Table 6:Coefficient of Determination

Variables	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Decision-Making Capacity of Administrators	0.517	0.553	0.083	6.199	0.000
Organizational Effectiveness	0.980	0.981	0.006	174.066	0.000
Organizational Transparency	0.198	0.232	0.095	2.080	0.038

Source: by the authors

The table 6 presents the coefficients of determination (R^2) for three dependent variables in the structural model: decision-making capacity of administrators, organizational effectiveness, and organizational transparency. The R^2 for decision-making capacity is 0.517, indicating that 51.7% of its variance is explained by the independent variables, with T statistics of 6.199 and a P value of 0.000, showing high significance. For organizational effectiveness, the R^2 is 0.980, meaning 98% of its variance is explained by the model, with very low variability (standard deviation of 0.006) and exceptionally high T statistics of 174.066, confirming its significance. For organizational transparency, the R^2 is 0.198, indicating that 19.8% of its variance is explained by the model, with T statistics of 2.080 and a P value of 0.038, indicating moderate significance. These results show that the structural model is highly effective in explaining the variance of organizational effectiveness, substantial for decision-making capacity, and moderate for organizational transparency.

Table 7:Effect Size

Variables	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Decision-Making Capacity of Administrators -> Organizational Effectiveness	3.605	3.689	1.499	2.404	0.016
Integration of FIS in Decision-Making Processes -> Organizational Effectiveness	17.746	19.756	8.189	2.167	0.030
Integration of FIS in Decision-Making Processes -> Organizational Transparency	0.247	0.325	0.180	1.373	0.170
Quality of Financial Information System (FIS) -> Decision-Making Capacity of Administrators	1.071	1.319	0.457	2.343	0.019
Quality of Financial Information System (FIS) -> Organizational Effectiveness	0.900	0.911	0.623	1.443	0.149
Organizational Transparency -> Organizational Effectiveness	0.618	0.596	0.448	1.380	0.168

Source: by the authors

The table above presents the effect sizes for various relationships in the structural model, including direct relationships between independent variables, mediating variables, and the dependent variable (organizational effectiveness). For the relationship between decision-making capacity of administrators and organizational effectiveness, the effect size is 3.605 with a T statistic of 2.404 and a P value of 0.016, indicating significance. For the integration of FIS in decision-making processes and organizational effectiveness, the effect size is 17.746 with a T statistic of 2.167 and a P value of 0.030, indicating a very strong and significant effect. The relationship between FIS integration in decision-making and organizational transparency has an effect size of 0.247, but it is not statistically significant (P value of 0.170). For the quality of FIS and decision-making capacity, the effect size is 1.071 with a T statistic of 2.343 and a P value of 0.019, indicating significance. The quality of FIS and organizational effectiveness

relationship is not significant, with an effect size of 0.900 and a P value of 0.149. Lastly, the relationship between organizational transparency and effectiveness is not significant, with an effect size of 0.618 and a P value of 0.168. These results highlight the significant impact of FIS integration and decision-making capacity on organizational effectiveness, while other relationships are not statistically significant.
In this regard, the results of the impact of Financial Information Systems (FIS) on the efficiency of public administrations in Morocco, particularly within the Regional Academy of Education and Training (AREF), have been analyzed and statistically validated. For the quality of the financial information system, better FIS quality improves the accuracy and reliability of financial information. This helps reduce operational costs associated with data processing errors and optimize decision-making processes. Although the effect is modest, investing in improving information systems can generate substantial efficiency gains in the long term.

Table 8:Hypothesis Test Results

Hypotheses	Statistical Results	Justification	Decision
The quality of the financial information system is positively associated with organizational effectiveness.	Path coefficient: 0.098, T-statistic: 2.658, p-value: 0.008	The path coefficient is positive and significant, indicating a positive association between FIS quality and organizational effectiveness. However, the effect is relatively modest.	Accepted
The integration of FIS into decision-making is positively associated with organizational effectiveness.	Path coefficient: 0.928, T-statistic: 33.161, p-value: 0.000	The path coefficient is very high and significant, suggesting a strong positive association between FIS integration and organizational effectiveness.	Accepted
The decision-making capacity of administrators acts as a mediating variable in the relationship between the quality of the financial information system and organizational effectiveness in public administration.	Indirect effect: 0.349, T-statistic: 5.112, p-value: 0.000	The indirect effect is positive and highly significant, indicating that the decision-making capacity of administrators significantly mediates the relationship between FIS quality and organizational effectiveness.	Accepted
Organizational transparency acts as a mediating variable in the relationship between the integration of the financial information system in decision-making processes and organizational effectiveness in public administration.	Indirect effect: 0.149, T-statistic: 2.252, p-value: 0.024	The indirect effect is positive and significant, suggesting that organizational transparency significantly mediates the relationship between FIS integration and organizational effectiveness.	Accepted

Source: by the authors

Regarding the integration of FIS into decision-making, effective integration of FIS into decision-making enhances the responsiveness and flexibility of public administrations. This results in quicker and better-informed decisions, which can improve the overall performance of the organization and stakeholder satisfaction. The strong positive and significant association between FIS integration and organizational effectiveness economically justifies the importance of this integration for improving administrative performance.
Concerning the decision-making capacity of administrators as a mediating variable, improving the decision-making capacity of administrators through high-quality information systems enhances their ability to optimally allocate resources and effectively respond to organizational challenges. This can lead to significant improvements in organizational efficiency and productivity. The mediating effect of administrators' decision-making capacity shows that FIS quality indirectly enhances organizational effectiveness through better decision-making.

For organizational transparency as a mediating variable, increased transparency in decision-making processes strengthens stakeholder trust and improves governance. This can reduce the risks of corruption and mismanagement while optimizing the use of public resources. The mediating effect of organizational transparency indicates that integrating FIS into decision-making processes indirectly improves organizational effectiveness by making operations more transparent.

Theoretically, the results of our thesis largely corroborate existing theoretical hypotheses in the literature.

Firstly, the hypothesis that "the quality of the financial information system is positively associated with the organizational effectiveness of public administration" is supported by our study, although the observed effect is modest. Our path coefficient for this relationship is 0.098 with a p-value of 0.008, which is statistically significant. This conclusion aligns with the works of Defacqz & Dupuy (2023), Onaolapo and Odetayo (2013), and Petter et al. (2013), who all demonstrated positive links between the quality of financial information systems and organizational effectiveness. The quality of the FIS improves the accuracy of financial reporting and decision-making, leading to better organizational performance.

Secondly, the hypothesis that "the integration of FIS into decision-making is positively associated with organizational effectiveness" is strongly confirmed by our study, with a path coefficient of 0.928 and a p-value of 0.000. This result is consistent with the research of Wixom and Watson (2001), Weber and Pliskin (1996), and Hendriks (2012), who emphasize the importance of integrating FIS to improve organizational performance through better use of data in decision-making processes.

Thirdly, the hypothesis that "the decision-making capacity of managers acts as a mediating variable in the relationship between the quality of the financial information system and organizational effectiveness" is validated by our study. The indirect effect of 0.349 is significant with a p-value of 0.000. This observation aligns with the works of Aydiner et al. (2019) and Iselin (1996), who showed that decision-making capacity effectively mediates the impact of high-quality FIS on organizational performance.

Fourthly, the hypothesis that "organizational transparency acts as a mediating variable in the relationship between the integration of the financial information system in decision-making processes and organizational effectiveness" is also confirmed, with an indirect effect of 0.149 and a p-value of 0.024. Our results reinforce the conclusions of Rodríguez Bolívar et al. (2013) and Kaufmann and Weber (2010), indicating that transparency facilitates better decision-making and improves organizational effectiveness.

6. Conclusion

This article examines in depth the mediating role of decision-making capacity and organizational transparency between the quality of financial information systems and organizational effectiveness in Morocco, focusing on the Regional Academies of Education and Training (AREF).

The results of this study reveal that the quality of financial information systems (FIS) is positively correlated with organizational effectiveness. Although this effect is modest, accurate and comprehensible financial reports significantly facilitate informed managerial decision-making. This precision and understanding of financial information enable managers to reduce operational costs and optimize decision-making processes.

The integration of FIS into decision-making processes is strongly associated with better organizational effectiveness. By effectively integrating FIS, public administrations can improve their responsiveness and flexibility, resulting in quicker and better-informed decisions. This integration also enhances stakeholder and end-user satisfaction.

The decision-making capacity of administrators is identified as a key mediating variable between the quality of FIS and organizational effectiveness. Administrators with enhanced decision-making skills, thanks to high-quality information systems, can allocate resources more optimally and respond more effectively to organizational challenges. This improvement in decision-making capacity translates into increased productivity and organizational efficiency.

Organizational transparency also plays a significant mediating role between the integration of FIS into decision-making processes and organizational effectiveness. Increased transparency strengthens stakeholder trust and improves governance. The clarity and availability of financial information facilitate better accountability and more informed decisions, thereby reducing the risks of corruption and mismanagement.

Despite these promising results, the study presents certain limitations. The sample used, composed of 110 respondents, might limit the generalizability of the results to a broader population. Additionally, since the study is centered on the AREF in Morocco, its conclusions might not be fully applicable to other contexts or sectors. To address these limitations, it is recommended to conduct comparative studies in different regions or sectors to validate the obtained results. Using larger samples would also enhance the robustness and generalizability of the conclusions.

For future research, it would be pertinent to evaluate the long-term impact of improvements in FIS and transparency on organizational effectiveness. Longitudinal studies would provide a better understanding of how these variables interact over an extended period and identify key success factors for the effective implementation of FIS.

In conclusion, this study highlights the crucial importance of the quality of financial information systems and their integration into decision-making processes, mediated by decision-making capacity and transparency, to improve the organizational effectiveness of the AREF in Morocco. The results emphasize the need to invest in high-quality financial information systems, promote their integration into decision-making processes, and enhance transparency to maximize organizational effectiveness. These strategies would not only improve the performance of the AREF but also contribute to broader socio-economic development in Morocco.

References:

(1). Albu, O. B., & Wehmeier, S. (2014). Organizational Transparency and Sense-Making: The Case of Northern Rock. *Journal of Public Relations Research*, *26*(2), 117-133. https://doi.org/10.1080/1062726X.2013.795869

(2). Aydiner, A. S., Tatoglu, E., Bayraktar, E., & Zaim, S. (2019). Information system capabilities and firm performance: Opening the black box through decision-making performance and business-process performance. *International Journal of Information Management*, *47*, 168-182.

(3). Beheshti, H. M., & Beheshti, C. M. (2010). Improving productivity and firm performance with enterprise resource planning. *Enterprise Information Systems*, *4*(4), 445-472. https://doi.org/10.1080/17517575.2010.511276

(4). Bergh, S. I. (2016). Public Sector Governance Reforms and Advanced Regionalizationn in Morocco: What Role for the European Union? *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2869851

(5). Bolton, P., Kacperczyk, M., Hong, H. G., & Vives, X. (2021). *Resilience of the financial system to natural disasters*. CEPR Press.

(6). Boutbhirt, N., & Adaskou, M. (2023). *Financial innovation of Small and Medium Enterprises in Morocco in the area of energy optimization: State of the art*. *412*, 01084.

(7). Defacqz, S., & Dupuy, C. (2023). A transformative change through a coordination process and a steering agency. The case of the financial information system of the French central state. *International Review of Administrative Sciences*, *89*(3), 775-790. https://doi.org/10.1177/00208523211058859

(8). Errami, Y., & Cargnello, C. E. (2018). The pertinence of new public management in a developing country: The healthcare system in Morocco. *Canadian Journal of Administrative Sciences / Revue Canadienne Des Sciences de l'Administration*, *35*(2), 304-312. https://doi.org/10.1002/cjas.1417

(9). Gardi, B., Abdalla Hamza, P., Sabir, B. Y., Mahmood Aziz, H., Sorguli, S., Abdullah, N. N., & Al-Kake, F. (2021). Investigating the effects of financial accounting reports on managerial decision making in small and medium-sized enterprises. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3838226

(10). Gorla, N., Somers, T. M., & Wong, B. (2010). Organizational impact of system quality, information quality, and service quality. *The journal of strategic information systems*, *19*(3), 207-228.

(11). Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, *31*(1), 2-24.

(12). Hartas, D. (2010). The epistemological context of quantitative and qualitative research. *Educational research and inquiry: Qualitative and quantitative approaches*, 33-53.

(13). Hendriks, C. J. (2012). Integrated Financial Management Information Systems : Guidelines for effective implementation by the public sector of South Africa. *South African Journal of Information Management*, *14*(1), 1-9.

(14). Hertati, L., Safkaur, O., & Simanjuntak, A. M. (2020). How to align management commitments to the successful implementation of management accounting information systems in manager decision making. *Ilomata International Journal of Tax and Accounting*, *1*(2), 89-102.

(15). Iselin, E. R. (1996). Accounting information and the quality of financial managerial decisions. *Journal of Information Science*, *22*(2), 147-153.

(16). ISMAEL, D. H. K., & AMEDI, G. M. (2019). Information transparency: A managerial practice to enhance employee engagement (an Explorative Study at Selected Hotels/Erbil City). *Journal of Duhok University*, *22*(1).

(17). Jia-yang, W. (2009). Application of Financial Decision Support System to Data Mining Technology. *Journal of Hunan University of Commerce*.

(18). Kaplan, D., Krishnan, R., Padman, R., & Peters, J. (1998). Assessing data quality in accounting information systems. *Communications of the ACM*, *41*(2), 72-78. https://doi.org/10.1145/269012.269024

(19). Kaufmann, C., & Weber, R. H. (2010). The role of transparency in financial regulation. *Journal of International Economic Law*, *13*(3), 779-797.

(20). Kim, S. (2004). Individual-level factors and organizational performance in government organizations. *Journal of public administration research and theory*, *15*(2), 245-261.

(21). Lannoo, K., & Thomadakis, A. (2020). Derivatives in sustainable finance. *CEPS-ECMI Study. Brussels: Centre for European Policy Studies*, *3*. https://www.sipotra.it/wp-content/uploads/2020/07/Derivatives-in-Sustainable-Finance.pdf

(22). Malekinejad, R. (2016). The effectiveness of financial statements in management decision making. *مجلة البحوث المحاسبية الدولية*, *42*(3495), 1-5.

(23). Mao, H., Liu, S., Zhang, J., Zhang, Y., & Gong, Y. (2021). Information technology competency and organizational agility: Roles of absorptive capacity and information intensity. *Information Technology & People*, *34*(1), 421-451.

(24). Monteiro, A. P., Vale, J., Leite, E., Lis, M., & Kurowska-Pysz, J. (2022). The impact of information systems and non-financial information on company success. *International Journal of Accounting Information Systems*, *45*, 100557.

(25). Negash, S., Ryan, T., & Igbaria, M. (2003). Quality and effectiveness in web-based customer support systems. *Information & management*, *40*(8), 757-768.

(26). Nias Ahmad, M. A., Smith, M., Ismail, Z., Djajadikerta, H., & Roni, M. S. M. M. (2016). Computerised Accounting Information Systems and Firm Performance: The Mediating Role of Transparency. In M. A. Abdullah, W. K. Yahya, N. Ramli, S. R. Mohamed, & B. E. Ahmad (Éds.), *Regional Conference on Science, Technology and Social Sciences (RCSTSS 2014)* (p. 49-59). Springer Singapore. https://doi.org/10.1007/978-981-10-1458-1_5

(27). Nour, M., Alsufy, F., & Makhlouf, M. H. (2022). Influence of financial information systems on increasing competitive advantage: Evidence from Jordan. *Invest. Manag. Financ. Innov*, *19*(1), 145-155.

(28). Onaolapo, A. A., & Odetayo, T. A. (2012). Effect of accounting information system on organisational effectiveness: A case study of selected construction companies in Ibadan, Nigeria. *American Journal of Business and Management*, *1*(4), 183-189.

(29). Palma-Alicer, M., Ligan, V. O., & Bandiola, A. N. (2022). A Structural Equation Model on the Job Performance of Employees in a National Government Agency in Region XI. *EPRA International Journal of Research and Development (IJRD)*, *7*(12), 158-167.

(30). Pasquier, M., & Villeneuve, J.-P. (2007). Organizational barriers to transparency: A typology and analysis of organizational behaviour tending to prevent or restrict access to information. *International Review of Administrative Sciences*, *73*(1), 147-162. https://doi.org/10.1177/0020852307075701

(31). Petter, S., DeLone, W., & McLean, E. R. (2013). Information Systems Success : The Quest for the Independent Variables. *Journal of Management Information Systems*, *29*(4), 7-62. https://doi.org/10.2753/MIS0742-1222290401

(32). Popper, K. (1959). *The Logic of Scientific Discovery*.

(33). Rodríguez Bolívar, M. P., Alcaide Muñoz, L., & López Hernández, A. M. (2013). Determinants of Financial Transparency in Government. *International Public Management Journal*, *16*(4), 557-602. https://doi.org/10.1080/10967494.2013.849169

(34). Sajady, H., Dastgir, M., & Hashem Nejad, H. (2008). Evaluation of the effectiveness of accounting information systems. *International Journal of Information Science and Management (IJISM)*, *6*(2), 49-59.

(35). Salehi, M., Dashtbayaz, M. L., Bahrami, M., & Teymoori, E. (2015). The effect of implementation of accounting information system on efficiency, profitability and productivity of SMEs in Iran. *Banks & bank systems*, *10, Iss. 3*, 79-86.

(36). Sari, E. N., & Priantinah, D. (2019). Managerial decision making with the role of Management Information Systems (MIS): What the literature says. *Petra International Journal of Business Studies*, *2*(1), 53-58.

(37). Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (p. 587-632). Springer.

(38). Schnackenberg, A. (2010). The constitutive role of transparency in organizations. *Case Western Reserve University Working Paper No*, *9*.

(39). Sewandono, R. E. (2021). The Mediating Role of Effective Strategic Decision Making in the relationship between Intellectual Capital and Information System Capability effect on Financial Performance. *Int J Account Res*, *9*, 200.

(40). Soputan, G. J., & Tini Moge, T. M. (2014). *Leadership effectiveness toward service productivity*. http://repository.unima.ac.id:8080/handle/123456789/416

(41). Taouab, O., & Ameur, S. (2018). Can We Talk About Transparency in Moroccan Public Finances? *European Scientific Journal, ESJ*, *14*, 16-85.

(42). Thakkar, J. J. (2020). Structural equation modelling. *Application for Research and Practice*.

(43). Vaccaro, A., & Madsen, P. (2009). Transparency in business and society: Introduction to the special issue. *Ethics & Information Technology*, *11*(2).

(44). Van Nhi, V., & Thoa, D. T. K. (2020). The role of top managers' supports in financial accounting information transparency in Vietnam's public sector. *Science & Technology Development Journal: Economics-Law & Management*, *4*(1), 562-573.

(45). Wang, Y., & Byrd, T. A. (2017). Business analytics-enabled decision-making effectiveness through knowledge absorptive capacity in health care. *Journal of Knowledge Management*, *21*(3), 517-539.

(46). Weber, Y., & Pliskin, N. (1996). The effects of information systems integration and organizational culture on a firm's effectiveness. *Information & Management*, *30*(2), 81-90.

(47). Wixom, B. H., & Watson, H. J. (2001). An empirical investigation of the factors affecting data warehousing success. *MIS quarterly*, 17-41.

(48). Zadorozhnyi, Z.-M., Ometsinska, I., & Muravskyi, V. (2021). Determinants of firm's innovation: Increasing the transparency of financial statements. *Marketing i menedžment innovacij*, *2*, 74-86.

(49). Zeqiri, I., & SADRI ALIJI, P. D. (2017). The role of information in financial decision making process: A theoretical view. *Globalization & Business*.

(50). Zheng, W., Yang, B., & McLean, G. N. (2010). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research*, *63*(7), 763-771. https://doi.org/10.1016/j.jbusres.2009.06.005